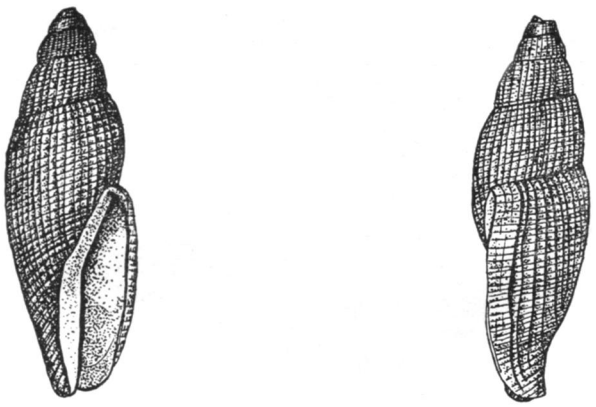
DESCRIPTIONS OF NEW SPECIES OF MARINE SHELLS.

BY E. G. VANATTA.

Metula amosi n. sp.

Shell solid; elongate; fusiform; cream-white, with slight indication of a subsutural, a peripheral, and a wide basal brownish spiral band. Spire elevated, conical, vertically costate with spiral striæ in the interstices. Suture impressed, irregularly crenulate. Whorls convex, 5 remaining. Body whorl sculptured with 41 vertical costæ crossed by 33 raised spiral lines, with a slight tubercle at the point of intersection. The first three spirals below the suture are strongest, the others becoming closer and finer at the periphery and then wider towards the base. There are 12 spirals on the wide, short, slightly



Figs. 1, 2.—*Metula amosi* Van.

recurved anterior canal, not crossed by the vertical costæ. Aperture elongate, about one-half the length of the shell. The outer lip is slightly arcuate, thickened externally, internally polished and a little crenulate, white at the slightly reflexed edge, internally cream-colored with a flesh-colored band along the outer margin and in the basal third. The parietal wall and columella moderately concave, covered by an adnate smooth callus, cream-colored tinged with flesh-color at the base.

Altitude 40, diam. 13, aperture alt. 22.5, diam. 7 mm.

Locality.—Panama.

The types are in the collection of The Academy of Natural Sciences, number 107,159, collected by Mr. S. N. Rhoads. This species is wider than the Japanese *Metula elongata* Dall and has a longer aperture. It differs from *Metula gabbi* B. and P. in being higher, narrower, more cylindrical, in having the sculpture on the early whorls less compact, base more attenuate, aperture longer, and the columella not so sinuous.

I take pleasure in naming this species after Dr. Amos P. Brown, one of the authors of *Metula gabbi*, the Oligocene species which is probably the ancestor of this form.

Haplocochlias swifti n. sp.

Shell small, umbilicate, turbinate, white, suture deeply impressed, spire elevated, whorls 5, very convex, contabulate, the first whorl somewhat eroded, the two following whorls bicarinate, the penultimate and body whorl more or less tricarinate. The body whorl is sculptured with 24 spaced spiral striæ with microscopic

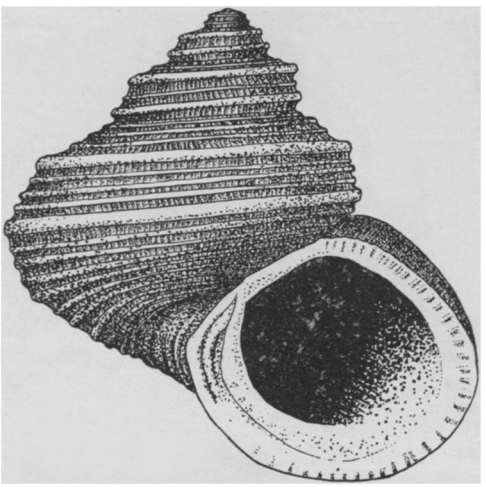


Fig. 3.—*Haplocochlias swifti* Van.

vertical striæ in the interstices. The fourth, sixth and eighth striæ below the suture on the body whorl are larger than the others and three or four striæ near the umbilicus are closer together. The umbilicus is of moderate size. The aperture is orbicular, peristome continuous, very thick, and broadly reflexed, crenate, parietal

callus thick, columella narrow above and broad at the base, bearing a median groove.

Length 3.92, diameter 3.92 mm.

Habitat.—St. Thomas, W. I.; collected by R. Swift.

Type in the collection of The Academy of Natural Sciences of Philadelphia, number 10,292. This species differs from *Haplocochlias cyclophoreus* Cpr. by having coarser spiral sculpture, by having a more reflexed lip, and by being umbilicate.

Vitrinella hemphilli n. sp. Pl. II, figs. 1, 3.

Shell small, depressed turbinate, hyaline, translucent, polished, with indications of irregular growth striæ; spire acute, composed of four convex whorls which are slightly concave below the suture. The aperture is large; peristome acute; parietal wall convex, with a very thin callus; columella concave, very narrow; umbilicus perspective, bordered by a very indistinct angle.

Alt. 1.56, diam. 2.5 mm.

Habitat.—Cedar Keys, Florida; collected by H. Hemphill, in whose honor it is named.

Types in the collection of the Academy, tray number 10,236.

This species has a wider umbilicus than *Vitrinella multistriata* Ver. and *Vitrinella helicoidea* Ad., it has a higher spire and more closely coiled whorls than *Vitrinella megastoma* Ad. and *Vitrinella tryoni* Bush.

Discopsis schumoi n. sp. Pl. II, figs. 2, 7.

Shell small, white, moderately polished; spire rather acute, depressed conic; suture impressed; whorls three and one-half, somewhat convex, sculptured above with a few irregular growth lines crossed by delicate distinct spiral striæ which are strongest below the suture and above the periphery. Peripheral carina very strong; base rather flat, sculptured with about twelve radial very broad costæ or undulations, crossed by numerous undulated spiral striæ. The umbilicus is large, deep, bounded by a heavy, cord-like, overhanging carina, the walls within the umbilicus are concave and smooth. The aperture is transversely sagittate, receding; peristome reflexed, very obtuse, provided with a great prolongation of the peripheral keel, the lip is arcuate above but flattened at the base and concave below the keel; parietal wall broadly triangular, widest above with a very heavy callus which extends forward on the body whorl beyond the aperture and fills the posterior angle of the mouth; the columella is concave, broadly triangular, narrowest above.

Alt. 1.25, diam. 2.47 mm.

Locality.—Monkey River, British Honduras.

The types are in the Academy's collection, tray number 76,581, and were taken from the anchor of a vessel by Silas L. Schumo, in whose honor the species is named.

This shell differs from *Discopsis omalos* De Folin by the radial sculpture on the base and the projection upon the outer lip, and has different basal sculpture from *Discopsis costulatum* De Folin. It differs from *Colonia radiata* Dall by having no longitudinal costæ upon the spire and having a large umbilicus.

Omalaxis funiculus contracta n. var. Pl. II, figs. 4, 6.

Shell small, white, somewhat polished; spire flat, bounded by a sharp angle; whorls about three and one-half, sculptured above with about seven or eight engraved spiral lines which become indistinct as they approach the aperture, ten engraved spiral lines are between the edge of the spire and the peripheral keel and eleven between the keel and the umbilicus, these lines and the peripheral carina become obsolete near the aperture. The umbilicus is perspective, funnel shaped, with smooth sides, and surrounded by a sharp carina. The aperture is suborbicular; peristome thick and evenly rounded; basal lip with a triangular callus; columella thick and very oblique; parietal callus ponderous and extending slightly beyond the aperture.

Alt. 1.04, diam. 1.85 mm.

Habitat.—Monkey River, British Honduras.

The type is in the collection of the Academy, tray number 106,125, taken from the anchor of a vessel by Silas L. Schumo.

This variety is distinguished from *Omalaxis funiculus* Dall by having a narrower umbilicus.

Teinostoma schumoi n. sp. Pl. II, figs. 5, 10.

Shell small, imperforate, white, polished, subspherical, very compact, suture impressed, early whorls rather concave in the middle, with the surface more or less undulate, the penultimate whorl with a spiral groove near the outer suture. The body whorl has the upper surface sculptured with a series of longitudinal undulations and a spiral cord at the edge. The face view shows seven widely spaced very heavy spiral cords, the two at the periphery being smallest. The base is imperforate, showing two of the spiral cords near the edge and a series of radial indentations bounded on the lower side by an engraved line. The umbilical region is slightly indented and provided with a few irregular radial growth lines. The aperture

is suborbicular, receding; outer lip rather acute; parietal wall very thick. The columella is very broad and provided with a ponderous callus.

Alt. 1.51, diam. 2.23 mm.

Locality.—Porto Barrios and Livingston, Guatemala.

The types are in the collection of the Academy, tray number 73,483, and were found in mud collected from the anchor of a vessel at both places.

This species differs from *Teinostoma solida* Smith by having radial sculpture on the base, by having sculpture on the upper surface and has more spiral costæ than *Teinostoma hondurasensis* and is imperforate.

Teinostoma hondurasensis n. sp. Pl. II, figs. 8, 12.

Shell small, polished, blue-white, translucent; spire slightly elevated, broadly conic; suture impressed; whorls four, a little convex, early whorls smooth, with a few indistinct growth striæ and a groove following the suture on the penultimate whorl. Body whorl from above rapidly increasing, is smooth, highly polished with a groove near the edge which becomes obsolete towards the aperture. In a face view it shows five spaced subequal spiral cords. The base is umbilicate, with a broad, smooth central area, bounded by a granulate ridge near the parietal wall which becomes a tuberculate spiral cord and finally a smooth cord at the basal lip. Two other spaced smooth spiral costæ are upon the outer part of the base.

The aperture is suborbicular, receding; peristome evenly arched, moderately thick, slightly interrupted by the terminations of two costæ near the base; basal lip thick; columella provided with a broad triangular callus; parietal wall very thick; umbilicus small.

Alt. 1.04, diam. 1.75 mm.

Habitat.—Belize and Monkey River, British Honduras.

The types are in the Academy's collection, tray number 76,535, found in mud taken from the anchor of a vessel at both places by Silas L. Schumo.

This species differs from *Teinostoma solida* Smith by being white, smaller, umbilicate, and having a different number of spiral cords. It is distinguished from *Teinostoma schumoi* by being umbilicate and having a different sculpture.

Teinostoma bartschi n. sp. Pl. II, figs. 9, 11.

Shell minute, discoidal, blue-white, somewhat translucent near the aperture; whorls three and one-half; suture shallow; spire very low

and evenly arched, smooth except for a few indistinct radial costæ on part of the penultimate whorl and a few very indistinct spiral lines near the periphery. The peripheral carina is very large, separated from the costa below by a wide furrow. In the basal view showing four spiral costæ, the one below the keel is subgranulate near the parietal wall, but smooth near the basal lip. The two costæ near the umbilicus are narrower, the growth lines are very indistinct. The umbilicus is wide, angular at the edge and separated from the spiral costæ by a broad, smooth area. The aperture is orbicular; peristome subacute, thickened at the terminations of three of the spiral ribs; columella concave, narrow; parietal callus moderate.

Alt. .71, diam. 1.47 mm.

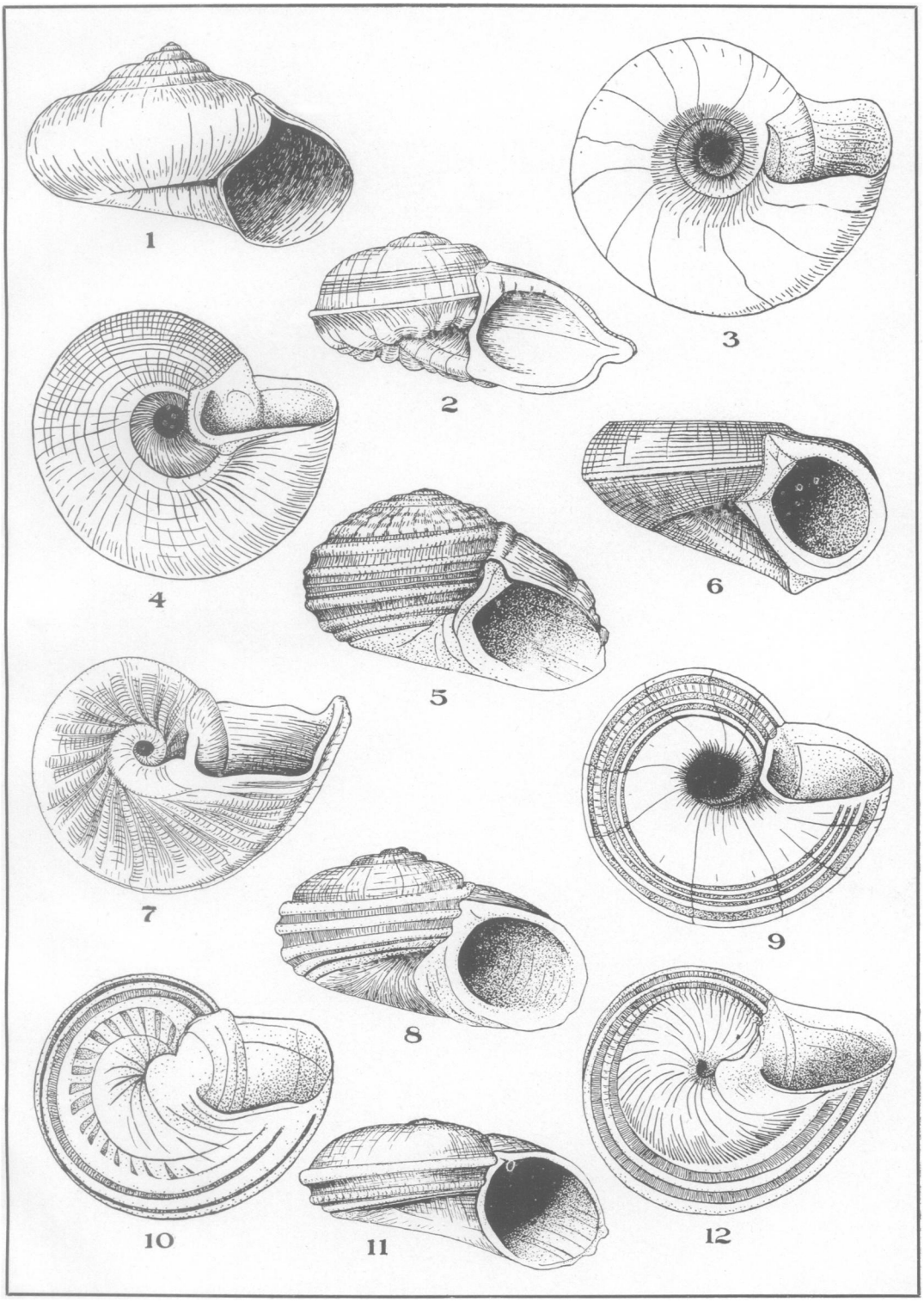
Locality.—Porto Barrios and Livingston, Guatemala.

Types in the collection of the Academy, tray number 76,501, found in mud collected from the anchor of a vessel at both towns.

This shell differs from *Adeorbis beaui* Fisch. by having a more depressed spire and unequal spiral costæ. It has a wider umbilicus than *Teinostoma hondurasensis.* Named in honor of Dr. Paul Bartsch, of Washington, D. C.

Explanation of Plate II.

Figs. 1, 3.—*Vitrinella hemphilli.*
Figs. 2, 7.—*Discopsis schumoi.*
Figs. 4, 6 —*Omalaxis funiculus contracta.*
Figs. 5, 10.—*Teinostoma schumoi.*
Figs. 8, 12.—*Teinostoma hondurasensis.*
Figs 9, 11.—*Teinostoma bartschi.*



VANATTA: NEW SPECIES OF MOLLUSCA.